

What is claimed is:

1 1. A method for determining the zero-point error
2 of a
3 Coriolis gyro (1') wherein
4 - the resonator (2) of the Coriolis gyro (1') has a
5 disturbance force applied to it such that a change in the
6 stimulation oscillation of the resonator (2) is brought
7 about, and
8 - a change in the read oscillation of the resonator (2),
9 which is produced by a partial component of the disturbance
10 force, is extracted from a read signal which represents the
11 read oscillation of the resonator (2) as a measure of the
12 zero-point error.

1 2. The method as claimed in claim 1,
2 characterized in
3 that the disturbance force is an alternating force which
4 modulates the amplitude of the stimulation oscillation.

1 3. The method as claimed in claim 2,
2 characterized in that the disturbance force has a
3 disturbance frequency whose period is substantially shorter
4 than the time constant of the stimulation oscillation but
5 is of the same order as or greater than the time constant
6 of the Coriolis gyro.

1 4. The method as claimed in claim 2 or 3,
2 characterized
3 in that the change in the read oscillation is detected by
4 subjecting the read signal to a demodulation process on the
5 basis of the disturbance frequency.

1 5. The method as claimed in claim 1,
2 characterized in that the disturbance force is produced by
3 a disturbance signal which is band-limited noise.

1 6. The method as claimed in one of the preceding
2 claims, characterized in that a linear combination is
3 formed of a controlled part of an alternating signal, which
4 produces the stimulation oscillation, and an alternating
5 signal, which results in the read oscillation being reset,
6 and is passed to a rotation rate control loop/quadrature
7 control loop for the Coriolis gyro, in such a way that the
8 change in the read oscillation determined from the read
9 signal becomes as small as possible.

1 7. A Coriolis gyro (1'), characterized by a
2 device for determining the zero-point error of the Coriolis
3 gyro (1'), having:

4 - a disturbance unit (26) which applies a disturbance
5 force to the resonator (2) of the Coriolis gyro (1') such
6 that the stimulation oscillation of the resonator (2) is
7 modulated,

8 - a disturbance signal detection unit (27), which
9 determines a disturbance component which is contained in a
10 read signal (which represents the read oscillation) and has
11 been produced by a partial component of the disturbance
12 force, as a measure of the zero-point error.

1 8. The Coriolis gyro (1') as claimed in claim 7,
2 characterized by a rotation rate control loop/quadrature
3 control loop.

1 9. The Coriolis gyro (1') as claimed in claim 8,
2 characterized by a control unit (28), which forms a linear
3 combination of a controlled part of an alternating signal,
4 which produces the stimulation oscillation, and an
5 alternating signal which results in the read oscillation
6 being reset, and passes it to the rotation rate control
7 loop/quadrature control loop for the Coriolis gyro (1'),
8 with the control unit controlling the linear combination of
9 the signals such that the disturbance component, which is
10 determined from the read signal, of the read oscillation
11 becomes as small as possible.

1 10. The Coriolis gyro (1') as claimed in claim
2 9, characterized in that the disturbance signal detection
3 unit (27) determines the disturbance component from a
4 signal which is emitted from a rotation rate regulator (21)
5 in the rotation rate control loop, and the linear
6 combination of the signals is added to an output signal
7 from the rotation rate regulator (21).